



## Preparing for Installation

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This chapter provides information that you need to know before installing a client adapter.

The following topics are covered in this chapter:

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- [Unpacking the Client Adapter, page 2-3](#)
- [System Requirements, page 2-4](#)
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# Safety information

Follow the guidelines in this section to ensure proper operation and safe use of the client adapter.

## FCC Safety Compliance Statement

The FCC, with its action in ET Docket 96-8, has adopted a safety standard for human exposure to RF electromagnetic energy emitted by FCC-certified equipment. When used with approved Cisco Aironet antennas, Cisco Aironet products meet the uncontrolled environmental limits found in OET-65 and ANSI C95.1, 1991. Proper operation of this radio device according to the instructions in this publication will result in user exposure substantially below the FCC recommended limits.

## Safety Guidelines

- Do not touch or move the antenna while the unit is transmitting or receiving.
- Do not hold any component containing a radio such that the antenna is very close to or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; otherwise, the radio may be damaged.
- High-gain, wall-mount, or mast-mount antennas are designed to be professionally installed and should be located at a minimum distance of 12 inches (30 cm) or more from the body of all persons. Please contact your professional installer, VAR, or antenna manufacturer for proper installation requirements.
- Use in specific environments:
  - The use of wireless devices in hazardous locations is limited to the constraints posed by the safety directors of such environments.
  - The use of wireless devices on airplanes is governed by the Federal Aviation Administration (FAA).
  - The use of wireless devices in hospitals is restricted to the limits set forth by each hospital.

## Warnings

Observe the following warnings when operating the client adapter:



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**Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use.**

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**In order to comply with FCC radio frequency (RF) exposure limits, dipole antennas should be located at a minimum of 7.9 inches (20 cm) or more from the body of all persons.**

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**In order to comply with RF exposure limits established in the ANSI C95.1 standards, it is recommended when using a laptop with a PC card client adapter that the adapter's integrated antenna is positioned more than 2 inches (5 cm) from your body or nearby persons during extended periods of transmitting or operating time. If the antenna is positioned less than 2 inches (5 cm) from the user, it is recommended that the user limit exposure time.**

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Translated versions of these safety warnings are provided in [Appendix B](#).

## Unpacking the Client Adapter

Follow these steps to unpack the client adapter:

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- Step 1** Open the shipping container and carefully remove the contents.
- Step 2** Return all packing materials to the shipping container and save it.
- Step 3** Ensure that all items listed in the “[Package Contents](#)” section below are included in the shipment. Check each item for damage.



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**Note** If any item is damaged or missing, notify your authorized Cisco sales representative. Any remote antenna and its associated wiring are shipped separately.

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## Package Contents

Each client adapter is shipped with the following items:

- Standard 2-dBi dipole antenna (PCI cards only)
- *Quick Start Guide: Cisco Aironet Wireless LAN Client Adapters*
- Cisco Aironet Wireless LAN Client Adapters CD
- Cisco product registration card

# System Requirements

In addition to the items shipped with the client adapter, you also need the following items in order to install and use the adapter:

- One of the following computing devices running Windows 98, 98 SE, NT, 2000, Me, or XP:
  - Laptop or notebook computer equipped with a Type II or Type III PC card slot or Cardbus slot
  - Desktop personal computer equipped with an empty PCI expansion slot
  - Handheld or portable device with an embedded LM card
  - Laptop or other computing device with an embedded mini PCI card




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**Note** Install Wizard version 1.3 or later and its software components are not supported for use with Windows 98, 98 SE, NT, and Me.

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**Note** PC-Cardbus cards are not supported for use with Windows NT.

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**Note** Cisco recommends using a display with a minimum resolution of 800 x 600 pixels.

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**Note** All drivers and supporting software (Card and Socket Services) for the PC card slot or Cardbus slot must be loaded and configured.

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- 35 MB of free hard disk space (minimum)
- A maximum of eight network connections if your computer is running Windows 98 or 98 SE




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**Note** Windows 98 and 98 SE limit your computer's network connections. If you try to install a client adapter when eight network devices (such as a PCMCIA Ethernet card, dial-up adapter, VPN adapter, docking station Ethernet card, etc.) are already connected to your computer, the new adapter cannot establish a network connection.

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- Windows NT Service Pack 6 or later if your computer is running Windows NT
- A Phillips screwdriver (for PCI cards)
- Software with WPA support if your wireless network uses host-based EAP authentication with WPA:
  - Funk Odyssey Client supplicant version 2.2 (for Windows 2000)
  - Windows XP Service Pack 1 and Microsoft support patch 815485 (for Windows XP)




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**Note** Meetinghouse AEGIS Client supplicant version 2.1 or later is also supported for use with Windows 2000 and XP; however, it was not tested with this client adapter software release.

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- The Microsoft 802.1X supplicant, if your wireless network uses EAP-TLS, PEAP, or EAP-SIM authentication

- If your wireless network uses PEAP authentication with a One-Time Password (OTP) user database:
  - SofToken version 1.3, 2.0, or later from Secure Computing; SecurID version 2.5 from RSA; or hardware token from OTP vendors
  - Your software token PIN or hardware token password
- If your wireless network uses EAP-SIM authentication:
  - PCSC-compliant smartcard reader installed in your computer's Type II or Type III PC card slot
  - Gemplus SIM+ smartcard inserted in the reader
  - The SIM card's PIN

**Note**

The EAP-SIM supplicant included in the Install Wizard file supports only Gemplus SIM+ cards; however, an updated supplicant is available that supports standard GSM-SIM cards as well as more recent versions of the EAP-SIM protocol. The new supplicant is available for download from Cisco.com at the following URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/access-registrar-encrypted>

- The following information from your system administrator:
  - The logical name for your workstation (also referred to as *client name*)
  - The protocols necessary to bind to the client adapter
  - The case-sensitive service set identifier (SSID) for your RF network
  - If your network setup does not include a DHCP server, the IP address, subnet mask, and default gateway address of your computer
  - The wired equivalent privacy (WEP) keys of the access points with which your client adapter will communicate, if your wireless network uses static WEP for security
  - The username and password for your network account
  - Protected access credentials (PAC) file if your wireless network uses EAP-FAST authentication with manual PAC provisioning

## Site Requirements

This section discusses the site requirements for both infrastructure and client devices.

### For Infrastructure Devices

Because of differences in component configuration, placement, and physical environment, every network application is a unique installation. Therefore, before you install any wireless infrastructure devices (such as access points, bridges, and base stations, which connect your client adapters to a wired LAN), a site survey must be performed to determine the optimum placement of these devices to maximize range, coverage, and network performance. [Appendix F](#), which is provided for people who are responsible for conducting a site survey, explains how ACU's site survey tool can be used to determine the best placement for infrastructure devices within a wireless network.

**Note**

Infrastructure devices are installed and initially configured prior to client devices.

## For Client Devices

Because the client adapter is a radio device, it is susceptible to RF obstructions and common sources of interference that can reduce throughput and range. Follow these guidelines to ensure the best possible performance:

- Install the client adapter in an area where large steel structures such as shelving units, bookcases, and filing cabinets will not obstruct radio signals to and from the client adapter.
- Install the client adapter away from microwave ovens. Microwave ovens operate on the same frequency as the client adapter and can cause signal interference.